

## **Historic, Archive Document**

Do not assume content reflects current scientific knowledge, policies, or practices.



62.73

60776020  
INDEXED

LIBRARY  
RECEIVED



U. S. Department of Agriculture.

**Hardy Nut Trees**  
**1921**  
**J. F. Jones**  
**NUT TREE SPECIALIST**  
**Lancaster,**  
**Penna.**



# FOREWORD



UT culture has made great strides the past few years. Interest in the proceedings of the Northern Nut Growers Association at Battle Creek, Mich., December, 1919, was unusually good and predictions were freely made that we were on the eve of a remarkable development in nut planting.

At the Battle Creek Sanitarium, where the Nut Growers had their headquarters, we had the pleasure of eating a number of delicious Nut Food preparations. We were also conducted through the big Kellogg Pure Food Factory, a mile or so out of the city, where we saw these nut foods being manufactured. No meat or flesh foods are served at the Battle Creek Sanitarium, nuts and nut foods taking the place of meat in the diet entirely. Dr. J. H. Kellogg, the founder of this famous institution, is the leading exponent of "The Nut Diet" in the U. S. Dr. Kellogg practices what he preaches and does not eat meat or flesh foods in any form and has not done so for forty years.

I wish to thank my friends for past favors and solicit your future orders with the assurance that they will receive the same careful attention that they have in the past.

J. F. JONES.

---

## Nuts and the Food Question

Scientists and far sighted people who have been solicitous for our future welfare, have been warning of the dangers threatening us because of the decreasing production of food stuffs, but it took the world war to bring home to us the fact that we were depending too much upon the production of annual plants for our daily bread. Besides the work and expense of growing annual plants, the system of clean cultivation necessary for their success, causes leaching and excessive erosion of the soil, and as a result, the land utilized for the growing of annual farm crops loses its fertility in a few years and refuses to respond and bring forth old time, bountiful harvests.

"Tree crops" will be the slogan of the future and by far the most important of these are the nut bearing trees. The apple and the peach are good to eat to be sure, but they have little actual food value in comparison to nuts as the analysis shows. Nuts are the most concentrated natural food known. They are ready to serve as the kernels come from the shell or they may be made up into various food forms combined with other materials, for which they are admirably adapted, since they are very rich and have a high protein and fat content and most foods are deficient in these elements.

## The Demand for Nuts

The production of nuts has not kept pace with consumption in this country and the demand very greatly exceeds the supply. If the supply of common wild nuts that go to make up the bulk of our supply at the present time were of fine budded or grafted sorts, consumption of nuts would be twenty times as great as it is today, provided, of course the supply was available, and at a reasonable price.

Value of nuts imported into the United States compiled by the Federal Department of Statistics:

1906	1907	1908	1909	1910	1911
\$ 7,228,607	\$ 9,315,891	\$ 9,563,742	\$ 8,549,997	\$12,775,196	\$14,265,572
1912	1913	1914	1915	1916	1917
\$15,626,485	\$13,508,307	\$19,815,713	\$16,865,244	\$20,594,434	\$33,667,681

**APPLICATION OF PRICES.** Six trees will be sold at the dozen rate and in assorted varieties, but must be made up of one general class, as 6 pecans, 6 English walnuts, 6 black walnuts, 6 filberts, etc.

**TREES BY PARCEL POST.** For information see order sheet inclosed herewith.

**DISTANCE FOR PLANTING.** Pecans and black walnuts 50 to 60 feet apart; English walnuts 40 to 50 feet apart; filberts and almonds, 15 to 20 feet apart.

Pecans, English and black walnuts do not need all of the room given them for 12 or 15 years, and fillers of smaller growing nut or fruit trees may be planted between them to good advantage; also any cultivated farm or garden crop may be planted between the trees, as they are little in the way of cultivation for several years.

**TOP WORKING SEEDLING TREES.** Those who have land with a natural growth of black walnuts, hickories or pecans, should write for a copy of my booklet on propagation and learn how to work these over to the improved varieties of the English and black walnuts, pecans, shagbarks, etc.

**My Nurseries are Located** three miles south of Lancaster, in a section noted for its productive soil. We have the main lines of the Pennsylvania and the Reading railroads which insure the prompt delivery of shipments at nominal rates.

**Visitors are Always Welcome** and personal inspection of stock is invited. The Quarryville and Strasburg trolley cars, leaving Lancaster every half-hour, pass the nurseries.

**I Guarantee All Trees** sent out to be well grown and of the size and quality specified, but claims for stock not satisfactory, must be made promptly upon receipt of the same.

**I Prune Trees** ready for planting, when so instructed, and wax over all cut surfaces with a specially prepared, tough wax, applied hot.

**When to Plant:** My hardy Pennsylvania grown trees may be planted either spring or fall. Trees may be planted any time while dormant and when the ground is not frozen. Shipping season in the fall, October 20th. to December 15th. and in the spring, March 15th. to June 1st. Trees for late spring shipments are held in my cold cellars, perfectly dormant, till June 1st. to 10th.

**Helps in Ordering:** For your convenience, order sheet and return envelopes are inclosed. Money may be sent in any way that is convenient. Postal Orders, Bank Drafts, Express Money Orders or personal check.

## Important Information

Nut culture, being a comparatively new industry, the purchaser of nut trees is dependent upon the nurseryman very largely for information and guidance. As a pioneer propagator of nut trees by budding and grafting, and with over twenty years experience in growing these trees, I am not only able to grow and supply the best trees to be had, but because of my long experience and special study of nuts and nut culture I am in position to furnish those desiring to engage in this fascinating and profitable industry the best and most reliable information. From the beginning, I have taken great interest in all phases of nut culture and am a life member of both the National and the Northern Nut Growers Associations. I have traveled extensively in the interest of nut culture and with two objects in view; that of studying new and promising varieties of nuts at first hand and getting all the information possible that would be helpful to those depending upon me for reliable information.

The propagation of nut trees is a highly specialized work and one that must be learned from the "ground up" if one is to succeed. These trees can not be propagated by ordinary methods as employed in the propagation of fruit trees, and even with the methods that I have perfected, results are always uncertain and not infrequently disappointinging. The general nurserymen are not therefore propagating nut trees by budding or grafting and can hardly be expected to do so.





A fine specimen of the Black Walnut growing in Mass.

## Facilities For Growing Nut Trees

I have gathered together here the largest and most valuable collection of new and rare varieties of nuts to be found. Owing to the difficulties encountered in the propagation of nut trees and especially in grafting with scions from old, bearing trees, working up Mother Blocks and stocks of trees is slow and expensive. My Mother Blocks, having been grafted direct from the original trees, have taken considerable time and expense to build up, but taking scions for propagation from these first generation, pedigreed trees, insures both the genuineness of the varieties and early and prolific bearing of the trees. My soil and climatic conditions here are very favorable for the growing of this class of stock and I get here a very stocky tree with a well matured and well ripened wood growth that may be safely planted anywhere that nuts can be grown.



## Growing Nut Trees with Superior Roots

Although nut trees make good roots here without special attention, we greatly improve this by cutting the tap roots of the young trees when they are one or two years old. Although new tap roots are usually formed, (usually two or three instead of one) the severing of the tap roots causes the trees to make more and better lateral roots which make for easier and safer transplanting. Such trees are not obtainable elsewhere.

## Plant Only Budded or Grafted Trees

I am sometimes asked what are the advantages of budded or grafted trees over seedlings. The difference is the same as with fruit trees. Varieties of either fruit or nuts can only be perpetuated by budding or grafting. If we want a Baldwin apple orchard we do not attempt to grow the trees by planting Baldwin apple seed, because we know that these seedlings will not hold true to type or variety, and that fruit of all sizes, shapes and colors will be produced when the trees come into bearing. We also know that these seedling trees will vary as much in vigor and productiveness, as in the fruit borne, and that they will take two or three times as long to come into bearing as do the grafted or budded trees. The same applies to nuts and it would be just as reasonable to plant a seedling apple orchard as to plant a seedling nut orchard. The only difference is, grafted varieties of nuts have not been available till recent years and people have become accustomed to planting seedling trees. By growing grafted or budded trees of improved varieties of nuts, we put nut culture on the same plane with fruit growing and there is nothing in the orchard line that promises greater returns to the orchardist than the planting of these improved, budded and grafted varieties.



Grafted English Walnut Tree planted in the poultry yard, Spring, 1913. Began bearing at three years old and has borne every year since. Produced nearly a half bushel of fine nuts. Fall, 1918. The owner Benj. Mylin, was 68 years old when he planted this tree, but he has lived to enjoy the fruits thereof and to give many fine nuts to his friends.





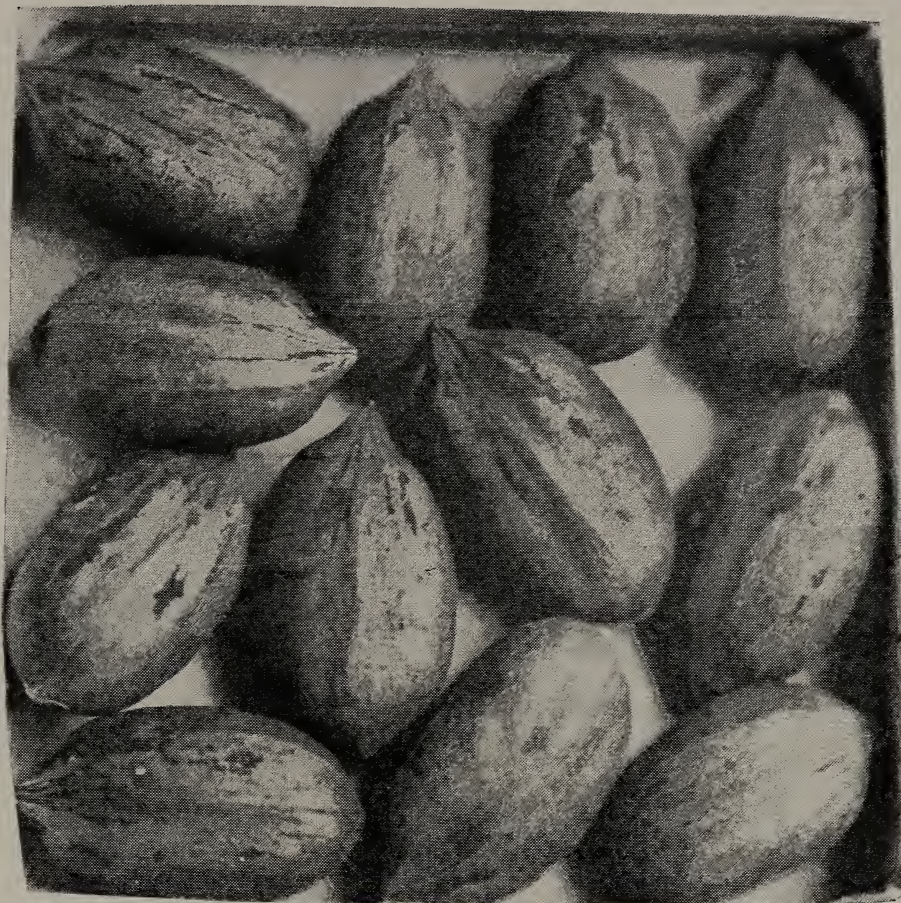
A three-year budded Pecan Tree ten feet high, in Mr. T. P. Littlepage's orchard, Bowie, Md.

### Hardiness of Nut Trees

I grow only hardy, northern varieties of nut trees for northern planting. All trees offered are grown here in my Pennsylvania Nurseries and are perfectly hardy and reliable. Much harm has been done the northern nut industry by a few northern nurseries selling southern pecan and other unreliable trees.

The extreme cold winter of 1917-18 was a severe test, but I did not lose any trees from frost and none had any protection whatever. Spring, 1918, many reports came in from customers expressing surprise and satisfaction with the hardiness of my hardy budded and grafted trees. Several customers in Michigan and New York reported that their English walnut trees from here went through the winter in good condition while apple trees suffered badly, many orchards being killed. With the exception of the hardshell almond and the filbert, I have always regarded the English walnut as less hardy than any other nut that I propagate, and their proving hardier than the apple in these instances more than fulfils my claims for them.





From the second crop of a five-year old Pecan Tree, grown by Mr. J. F. Wilkinson.  
Rockport, Ind.

## Ornamental Value of Nut Trees

It seems hard for some people to get away from the idea that they must plant maples, poplars or other worthless trees simply because others are planting them, when nut trees are far more ornamental; make just as good shade trees, and in addition produce a bountiful supply of nuts for home use if trees of good budded or grafted varieties are planted.

What constitutes an ornamental tree? The two factors of prime importance, and which the landscape architect looks to especially, are beauty and rarity. He is willing to sacrifice much on the former, if a specimen is rare. If one goes into a well planted place, the trees and shrubs one sees every day are hardly noticed, but new or rare specimens attract one's attention at once. A lawn or home grounds planted with nut trees, will attract more attention than any other planting that can be made. The early bearing of the grafted trees enhances their attractiveness as well as their usefulness.

Shrubby or herbaceous plants can be planted between or around the nut trees the same as with other trees. These trees, being very deep rooted, will not suffer because of being near the shrubbery, provided the soil is fertile, and the shrubbery will do better near these trees than they will when planted near ordinary shade trees which root shallow and spread their roots over a wide area.





Gathering English Walnuts from a two-year tree in my test orchard.

## Age of Bearing

One of the big advantages of budded or grafted nut trees is early bearing. We often have the improved English walnut trees to bear nuts the third year and sometimes the second, and they may be counted upon to bear by the fifth year here. The black walnut is no exception, and bears nearly, if not quite, as early as the English on the average. The heart nut bears even younger and it is not unusual for the Lancaster to bear a few nuts the second year after grafting. A top-worked pecan tree in Mr. J. G. Rush's grounds, West Willow, Pa., which we grafted for him spring 1917, bore a few nuts in the season of 1919.

Mr. J. F. Wilkinson, a pioneer pecan grower in Indiana, says: "All of my four year budded and grafted pecan trees bore from 20 to 97 nuts each last fall, and most of them bore a few nuts in 1918, at three years old. Three trees bore a few clusters of nuts each in 1917, at two years old."

## Supply and Prices of Trees

Like other nurserymen, I was obliged to curtail planting during the war, but at the beginning of the war I had a good supply of stocks in nearly all sizes coming on, and have been able to keep up a steady supply of trees up to this year, even with short help, but the supply of many trees now is short, and as it takes considerable time to grow stocks of most nut trees large enough for budding, it will take several years to work up a large stock again. In the mean time, those desiring to plant many trees, would do well to arrange ahead for their trees by having them grown on contract. When we consider the cost of growing and digging this class of stock, together with the skill required to propagate them, I am offering the cheapest trees in the whole nursery line to-day, to say nothing of the incomparable value of the budded or grafted trees.

## Nut Trees on the Farm

I sell comparatively few trees to farmers and I regret that this is so, because every farm ought to have an assortment of nut trees and at least grow a plentiful supply of the best nuts for home use. Unlike fruit trees, nut trees require little or no attention after the trees are established, and this fact should make them appeal especially to the farmer, who often does not have the time or the proper equipment to properly care for fruit trees.

There are many places on the average farm where these trees can be planted and where they will add to the attractiveness of the farm and the farm buildings, and the supply of nuts the trees produce is practically a clear gain.



Many farms have waste land that if planted to nut bearing trees would, in a few years, yield more clear profit than do the farm crops now grown on the entire farm.



English Walnut Trees growing along the roadside. Property of M. Herr. These trees bear several bushels of nuts each year and without any cultivation, the land being used for pasture.

## Soil, Locations and Climatological Data

Some people seem to think that to succeed with nut trees requires some particular kind of soils or location. The fact is, most of the nut bearing trees are less exacting in their soil and climatic requirements than are our more common fruit trees, and these trees will often succeed where fruit trees would fail. This is especially true of the black walnut, heart nut and pecan. These trees are doing well in many cases on the heavy black soils of Ind., Ill., Iowa, Mo., and Kans., where few fruit trees can be grown, also on a great variety of soils, including light sandy soils, if the fertility of the soil is kept up.

**THE BLACK WALNUT** grows naturally from Canada to Florida, and from Maine to the Great Divide, and on about all kinds of soils and locations. The climate of Colorado is especially trying on trees but the black walnut is doing well there. My grafted trees are also doing well in Washington and Oregon.

**THE HEART NUT** is a sport or variation from the Japanese walnut, *juglans sieboldii*. The tree is very hardy and does well from Canada to Florida, and it is believed it will do well anywhere the black walnut grows.

**THE NORTHERN PECANS** are as hardy as the other hickories and in this regard should not be confused with the southern pecan. In a wild or natural state, the pecan grows from Terre Haute, Ind., and Clinton, Iowa, on the north, to the Gulf Coast on the south. The tree grows in the river bottoms and will succeed on land that is too low and damp for most trees. Because of this, it



was formerly thought that the tree required excessive moisture for success but this was long disproven by the thousands of trees growing thriftily and bearing well on high and dry locations, and on a wide range of soils. The pecan has proven to do well on even light sandy soils, if the soil fertility is kept up, as well as on the clay and clay loam soils. The varieties I am propagating are from Indiana, Iowa and Mo. and the trees are perfectly hardy.

**THE ENGLISH WALNUT**, when budded or grafted upon the native black walnut stock, as I grow them, ripen their wood growth up earlier and better than do seedling trees and are therefore considerably hardier than seedling trees. Grafted on this stock, the tree is also adapted to a wider range of soils, but the tree is more exacting in its climatic requirements than is the black walnut or other native nuts. While the English walnut can be grown with more or less success in all the eastern, middle and southern states, (and I have good reports on both the growth and bearing from all these states) my opinion is that its cultural range for commercial orcharding will follow that of the sweet cherry in the eastern and northern states, and where the sweet cherry (Hearts and Bigarreaus) succeed, one need have no hesitation in making large plantings of my hardy budded and grafted trees. These trees are doing well in the lake region, from New York to Michigan; also in Mass. and Conn., as well as farther south, and mature their nuts well in the short seasons of these northern states, but on the heavy black lands from southern Indiana westward, their success is irregular and uncertain. The trees are doing well in Kentucky and in the Ozark mountains in Mo. and Ark. and should do well in Okla. Contrary to my earlier expectations, my grafted varieties of the English walnut are doing well in S. C., Ga., and Ala. and it is believed the hardy, late vegetating, Mayette and Franquette will prove to be a profitable commercial proposition in these states.

Mr. J. B. Wight, Cairo, Ga., says: "Both trees of the Rush English walnut bought of you a few years ago bore the past year. The nuts produced were



The Black Walnut planted as a street tree. The Pecan is also admirably adapted to this purpose.



fully up to those bought in the market. I have not as yet decided whether or not it can be profitably grown here, but see no reason why it may not." Mr. Wight is a large and very successful grower of pecans.

**THE EUROPEAN FILBERT** can be grown where the English walnut succeeds, except that it does not do well in the lower south, and the tree requires well drained locations for best results.

## Yields and Profit

I am sometimes asked what a pecan, English or black walnut tree will produce at a given age. No one can tell what any certain tree or trees will bear at a given age, because conditions are too varied, but we can estimate the crop in a general way. Good budded or grafted trees of good bearing varieties of these nuts, when properly planted and cared for till the trees are well established, will begin bearing about as early as the apple and should produce profitable crops as soon as the trees are large enough to carry good crops of nuts. On rich land, this should be about as early as the apple.

It is conservatively estimated that if one plant, say, 1000 good budded or grafted trees of the pecan, English or black walnut, (or some of each) and give the trees proper care till established, that they will return a net profit of at least \$3000.00 a year at 10 to 12 years of age and the yield will increase rapidly with the growth of the trees and should reach at least \$10,000 a year when the trees are in good bearing. If the nuts are cracked and the kernels marketed, the income should be considerably larger than this. It is felt that the above estimate is very conservative, and I believe that this is so, as I know several trees the crop of which sells for \$100.00 or more in a single year. Estimating an orchard on the basis of these trees, (and there is no good reason why we can't duplicate them or even beat them) profits would be very large, as the cost of growing is practically nothing, and the nuts, falling to the ground when ripe, are easily and cheaply gathered and are not perishable, but may be sold as they come from the trees or they may be cracked and the kernels sold at one's leisure, during the fall and winter months. Every year sees a large increase in the quantity of nuts cracked, and eventually they will be sold that way almost entirely. The average person will not eat very many nuts if they have to crack them, but if they are cracked and put on the market in a readily usable form, the demand will be practically unlimited. Remarkably efficient power crackers have been invented and are now in use cracking pecans, and it is believed that just as good one's will be devised for cracking good black walnuts and other nuts as soon as we have them in sufficient quantity to justify the manufacture of such machines. Eventually, nut crackeries will be in operation all over the country and those having only a few hundred pounds of nuts or those who prefer to sell their product as they come from the trees, can dispose of their product readily and without the trouble of bagging and shipping them.

Some people, in investigating the possibilities in growing nuts, compare production and sales per acre with those of the best apple or peach orchards. Unless one knows what the fruit grower is up against in his fight with insect pests and diseases, the comparison is not a fair one. It is not what a crop sells for that determines the profit or the satisfaction of growing. With half the gross sales per acre, a nut orchard might show more net profit, and the crop is certainly more satisfactory to grow and handle. Also, the nut trees require comparatively little care or attention and are permanent, outliving several generations of fruit trees. When fruit is low in price, the fruit grower must go ahead with the necessary spraying, pruning, cultivation and thinning of the fruit, even though returns do not justify the expense, because if left to shift for themselves, fruit orchards are soon gone and the investment is lost. On the other hand, nut orchards, while the trees respond to manuring or added soil fertility, in increased growth and bearing, the trees will go along in good shape without, and if the land on which they are growing is naturally rich or has been previously made so by manuring or the growing of leguminous crops,

the trees will continue to bear good crops of nuts without any further attention to soil fertility, at least for a number of years.

Mr. E. A. Riehl, the noted Illinois nut and fruit grower, has a number of Thomas black walnut trees in bearing and wrote me in Dec. 1915 that he had sold all of his Thomas kernels at 80c per lb. wholesale, and as he got 10 lbs. of kernels to the bushel of nuts, he considered their growing very profitable. Later, Mr. Riehl wrote me that if he was a younger man he would plant at least 1000 grafted Thomas black walnut trees, as he considered their growing the best proposition that he knew of. Since this correspondence with Mr. Riehl nuts and nut kernels have nearly doubled in price. It does not require a large black walnut tree to bear a bushel of nuts, and I would expect them to do this at eight to ten years of age.

## How to Succeed With Nut Trees

Because we see the black walnut, the pecan and the hickories growing in a wild or natural state, and occasionally bearing good crops of nuts, under adverse conditions, some people seem to think that these trees do not require any care or attention. While this is true as regards the trees when established, at least if they are planted on good land, the young trees should have some attention till they are established. When the trees are poorly planted on old, worn out land, and left to shift for themselves, failure will be the result, and the same is true of any other tree or trees. The principal requirement for success with nut trees is soil fertility. The nut tree is a natural engine of production and, with the help of sunlight and moisture, can turn the crude soil salts and fertility into a finished and highly concentrated food product, but we cannot expect the tree to produce large or regular crops unless the soil fertility is kept up, any more than we can expect the gas engine to run without gas or oil. However, it is not necessary or even advisable to delay the planting of the nut orchard because the land to be planted is not fertile. By using some good fertilizer such as bone meal or tankage, mixed with the soil around the roots in planting the trees, we can supply the fertility necessary for good tree growth at once, and very cheaply, as two or three quarts of this material is sufficient for average size trees, and by mulching the ground lightly around the trees with stable manure, grass, straw, leaves or other material, sufficient moisture can be maintained for good tree growth without cultivating the land. This annual mulch, rotting on the surface, quickly builds up the soil about the tree, and by growing Sweet Clover or other legumes the land can be built up to a high state of fertility with very little expense and while the trees are growing. Nut trees do not require cultivation and, being planted 40 to 50 feet apart, in orchard form, the young trees use only a small portion of the area for several years, and this gives ample time and opportunity to build up the soil in a natural way, and at the same time no time is lost in bringing the orchard forward. When these trees are planted on good farm land, one can continue to crop the land for several years if desired, and the distance given the nut trees in orchard form makes them little in the way of cultivating farm or truck crops for several years.

I mention Sweet Clover especially in connection with soil improvement, because, in my experience, it is the only legume that does well on old worn out or gullied fields. Sweet Clover is really a wonderful plant, as it not only takes well on poor, worn soils, but it will grow 6 or 8 feet tall. The unhulled seed is the best to use. We sow this at the rate of one-half bushel to the acre, right on the hard ground, without any preparation whatever, with excellent results.

## The Pecan

**BUSSERON.** From Knox Co., Ind. Considered one of the best of the Indiana pecans, and one of the most reliable. Nut large, long, and of fine appearance. The original tree has a great bearing record and the variety is one of the safest and best.

**BUTTERICK.** From near Grayville, Ill. The old Butterick tree is one of





the "giants," and has been bearing beyond the memory of the oldest inhabitants. The nut is one of the largest of the Indiana group and a real paper-shell of excellent quality. The original tree is a heavy and regular bearer. The Butterick combines large size, with a real paper-shell nut of high quality, and a rapid growing tree that bears very early, and is perhaps the best all round pecan of the Indiana group.

**GREENRIVER.** Originated in Henderson Co., Ky. The nut is medium size; shell thin; kernel full and plump and of the best quality.

**INDIANA.** From Knox Co., Ind. One of the largest of the Indiana pecans and one of the best. The nut is thin shelled, full meated and of very good quality. The tree is a very heavy bearer. One of the best pecans.

**MARQUARDT.** Named and introduced by me. The Marquardt I consider a very remarkable pecan to have originated so far north. Coming from 20 miles north of Burlington, Iowa, and 200 miles north of where the Indiana varieties originated, the Marquardt should not only be hardy in tree but mature its fruit well in the Lake region or similar latitudes where the success of the Indiana sorts is questionable. The nut is as large as the Indiana varieties; with a thin shell, and full kernel of excellent quality. If one has any doubts about the pecans of the Indiana group maturing their fruit with them this is the variety to plant.

**NIBLACK.** Originated in Knox Co., Ind. Named for Hon. Mason J. Niblack, Vincennes, Ind. Nut medium to large; shell very thin; kernel full and plump and of the very best quality. Cracking quality the very best. One of the most desirable of the Indiana group and it is believed it will do well farther north than any other of this group.

**POSEY.** From Gibson Co., Ind. One of the largest and finest pecans of this group. The nut is very large and a real paper-shell. The cracking quality



Marquardt Pecan

is the very best. The tree is of a very stocky growth with very large, luxuriant foliage, and very ornamental.

Prices of Pecan trees, either budded or grafted on Indiana seedlings:

1½ to 2 feet	\$1.75 each or \$17.50 per dozen.
2 to 3 feet	2.00 each or 20.00 per dozen.
3 to 4 feet	2.25 each or 22.50 per dozen.
4 to 5 feet	2.50 each or 25.00 per dozen.
5 to 6 feet	2.75 each or 27.50 per dozen.
6 to 7 feet	3.00 each or 30.00 per dozen.

## The English Walnut

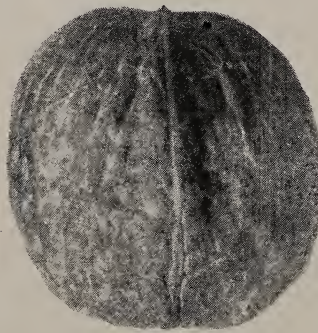
**FRANQUETTE.** One of the finest walnuts and the tree is very hardy and very reliable. Nut medium to large; shell medium to thin; kernel large, full and of excellent quality. My trees are the Vrooman variety which is much the best of these nuts.

**MAYETTE.** Nut quite large, smooth and of attractive appearance. Kernel large, full and of excellent quality. Considered the best walnut known. The tree is very hardy and reliable and one of the safest to plant. My trees are of the Wiltz variety which is much the best of this type. Unlike the old Mayette, the Wiltz Mayette bears very early.

**RUSH.** The Rush has the distinction of being the first eastern variety to be propagated. It was named by me for the originator, and introduced in 1904. The nut is medium to large; quite smooth and attractive, the kernel is full and of splendid quality. The tree is very hardy; a very rapid grower and early bearer. Perhaps the best eastern variety.



Wiltz Mayette



Rush



Vrooman Franquette

Prices of English walnut trees budded or grafted on black walnut stocks:

1½ to 2 feet	\$1.75 each or \$17.50 per dozen.
2 to 3 feet	2.00 each or 20.00 per dozen.
3 to 4 feet	2.25 each or 22.50 per dozen.
4 to 5 feet	2.50 each or 25.00 per dozen.
5 to 6 feet	2.75 each or 27.50 per dozen.



## The European Filbert

**AVELINE.** Medium size nut; very thin shell. Kernel very plump, clean and of excellent quality. One of the best filberts.

**BARCELONA.** Nut large; shell medium; quality good. Considered one of the best.

**ENGLISH.** Medium to large; thin shell, quality good.

1 to 2 feet \$1.00 each or \$10.00 per dozen.

2 to 3 feet 1.25 each or 12.50 per dozen.

3 to 4 feet 1.50 each or 15.00 per dozen.

## The Heart Nut

**THE HEART NUT**, *juglans cordiformis*, from Japan is very rare in this country for the reason that it is only a "Sport" or variation from the common Japan walnut, *juglans sieboldiana* according to Sargent and almost invariably reverts to that type or species from seed. Owing to the extra cracking quality of the nut, the rapid and luxuriant growth and early and prolific bearing of the tree, the Heart Nut is one of our most valuable nut bearing trees.

Those looking for a nut tree that will equal the poplars, maples and willows in extreme rapid growth should plant the Heart Nut. Besides equaling these trees in extreme rapid growth, the Heart Nut tree is far more valuable as an ornamental as well as one of our best and most reliable nut trees.



Lancaster Heart Nut

**LANCASTER.** I consider the Lancaster Heart Nut one of the most valuable nut trees I have ever propagated and introduced and that is saying a good deal. The cracking quality of this variety is especially good; the shell opens in halves and the kernel simply drops out whole, in a solid lump. The tree is of very robust growth with very large, almost tropical looking foliage and quickly makes a striking and very beautiful specimen on the lawn or in the home grounds. The grafted trees bear very quickly; usually the second year after planting here, and the tree is a very regular and prolific bearer. The nut is heart shaped, smooth, brown in color and is of excellent quality, having a flavor closely resembling our butternut. The nuts are borne in clusters of from 5 to 15 nuts. Prices of budded or grafted trees one year old, 5 to 6 ft. high, \$3.00 each; 4 to 5 ft. high, \$2.75 each; 3 to 4 ft. high, \$2.50 each; 2 to 3 ft. high, \$2.25 each; 1½ to 2 ft. high, \$2.00 each.

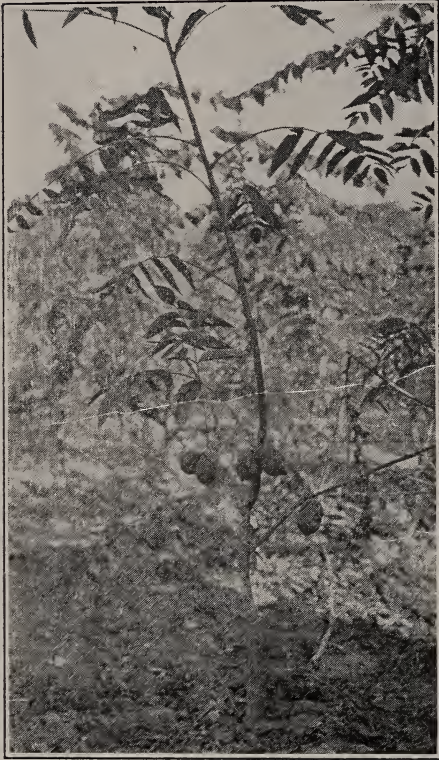
## The Hard Shell Almond

**RIDENHOWER ALMOND.** Originated in Illinois, where the tree is perfectly hardy and bears good crops. Nut medium size; quality very good. The Ridenhower almond will succeed anywhere that the peach can be grown and is desirable for home use.

4 to 6 feet trees \$1.00 each or \$10.00 per dozen.

3 to 4 feet trees .85 each or 8.50 per dozen.

## The American Black Walnut



Grafted Black Walnut Tree Bearing Seven Nuts 17 Months after the Tree was Grafted

**OHIO.** From Northern Ohio. Named and introduced by me. Nut medium to large; shell thin; kernel full of good quality. An excellent cracking nut, and the halves of the kernels can be removed entire in most cases. Tree a good grower and very early bearer.

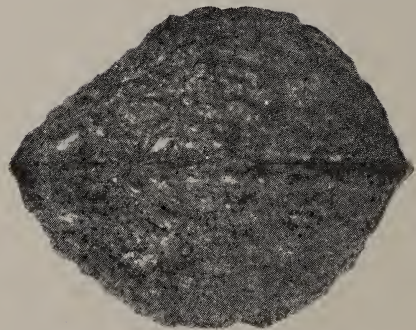
**STABLER.** Originated in Md. One of the finest black walnuts and the best of all in cracking quality, the kernels being easily removed in halves in most cases when the nut is cracked. Nut medium size; shell thin; kernel full and of good quality.



The Thomas



Ohio



Stabler



**THOMAS.** Originated with the late Jos. Thomas, King of Prussia, Pa. One of the finest black walnuts yet found and the best of all the large nuts in cracking quality. Nut very large; kernel large, light colored, and of very good quality. The tree is a wonderful grower, fully doubling the ordinary black walnut in growth.

Prices of grafted or budded black walnut trees:

1½	to 2 feet	\$1.50 each or \$15.00 per dozen.
2	to 3 feet	1.75 each or 17.50 per dozen.
3	to 4 feet	2.00 each or 20.00 per dozen.
4	to 5 feet	2.25 each or 22.50 per dozen.
5	to 6 feet	2.50 each or 25.00 per dozen.
6	to 7 feet	2.75 each or 27.50 per dozen.
7	to 9 feet	3.00 each or 30.00 per dozen.



Miss Louise Littlepage, Bowie, Md., gathering Black Walnuts from a five-year tree.

## Planting and Care of Nut Trees

It is important that nut trees be handled and planted carefully to get the best results. Keep the roots moist and expose as little as possible to sun or wind in handling. The holes should be dug amply wide to accommodate the roots and a few inches deeper than the roots are long. No manure or other coarse material should be used in the holes about the roots. A few handfuls of bone meal or tankage, mixed with the soil about the roots, will do no harm and will give good results. Only good top soil should be used in filling the holes, and this must be well firmed about the roots, while the tree is being planted by tamping with the spade or shovel handle or a tamping stick with a smooth, rounded end, that will allow the earth to be well tamped and at the same time, not bruise the roots. Most failures in transplanting are due to the planter not firming the earth well about the roots of the tree or from using water in the holes as the trees are being planted. If water is used and the soil handled while wet, it will harden and shrink away from the roots in drying. For the same reason, trees should never be planted soon after a heavy rain, or at any time when the ground is very wet. If trees arrive when the ground is very wet, heel them in or put in the cellar till the ground is in condition to plant. If the ground is dry, so much the better for planting, and the trees may be watered after they are planted. Remove a shovel of earth on two sides of the tree, and a foot or more away; fill the holes with water and after this has soaked in, put the dirt back, leaving a loose mulch on top. If the clay is thrown out and away from the holes, and only top soil used in filling the holes,—taking this top soil from a circle surrounding the tree, when the tree is planted, it will be surrounded by a depression or basin a few inches below the surface level. This is a decided advantage, with such trees as the pecan, walnut and persimmon, as I have found by several years experience. These trees may be planted this way either spring or fall, and on any land not naturally wet. Trees planted in this way not only live better, but grow much faster, as the basin about the tree gathers both moisture and fertility during rains, and is eventually filled up with the most fertile soil. This method of planting is especially desirable where trees are to be grown without cultivation. It is possible, by this method of planting, supplemented with an annual mulch, to grow vigorous trees and profitable orchards easily and cheaply on rough, cheap land, that would be quickly ruined by erosion, if cultivated. By sowing sweet clover or other strong growing legumes, a plentiful supply of mulching material can be grown right where it is needed, and at the same time, the land improved and built up.

**NUT TREES MUST HAVE THE TOPS REDUCED** or cut back, either before or after planting. This forces an early and stronger growth and induces the formation of new feeding roots and the tree is well established in its new location much sooner. If the top over-balances the root system to any appreciable extent, the over-taxed roots will simply become exhausted and no new roots will form, with the result, that even though the tree may live, it will linger along several years before getting started. The top should be reduced one-half to two-thirds depending upon the size of the tree and its root system.

**TRAINING THE TREES.** A four or five foot tree, when cut back to two feet, will usually throw out several strong shoots, and this is just what is wanted. These shoots, being low, induce a quicker and stronger root formation and a sturdier tree. The head of the tree will not be wanted so low, but all growth should be allowed to remain until the tree is well established. The most vigorous shoot may then be selected and trained to form the future tree. This can be trained up-right, by tying to a stake where necessary. The tree should become well established in its new location by the end of the second growing season, when the surplus shoots may be removed and all of the sap thrown into the shoot selected to form the tree.

## Additional Information

The American Nut Journal, Rochester, N. Y., is the best Nut Journal published, and any one who is especially interested in nuts or nut culture should subscribe for it.



## Why the Hesitancy in Planting Northern Nut Trees?

The Journal has repeatedly advocated the planting, in orchard form, of named varieties of nut trees of various kinds in the northern states, for the purpose of arriving at definite results and as a basis for development. A long time has been spent in investigation and selection of varieties. Special nut nurseries are producing carefully propagated trees true to name. Still there is hesitancy about planting.

California nut growers, now and for years back, shipping nuts in car load lots, got their start by planting the varieties of trees available years ago. They have progressed with the times.

Pecan growers of the southern states got their start, too, 12 or 15 years ago, by planting varieties then at hand. They are now shipping pecans in car-load lots—fine cultivated nuts, graded, under brand.

Northern nut growers on the other hand are still experimenting, though they have at hand, and ready to plant, as many or more varieties and just as promising as had the growers of pecans in the south and of almonds and walnuts on the Pacific coast years ago.

Hickories, walnuts, butternuts, chestnuts, etc., are growing wild in the northern states just as pecans grow wild in the southern states. There are many commercial orchards of nut trees in the south and west. There are one or two in the north. What's the answer?

Nut brokers and dealers are clamoring for more nuts to meet the demands of their customers. At present they are dependent for hickory nuts, butternuts, black walnuts, chestnuts, etc., upon the persons who have time, amid other duties, to sally forth to the woods and endeavor to beat the squirrels to it in picking up what nature pleased to drop among the leaves and underbrush, very much after the fashion and under the conditions pertaining to the period following the era of the cave man. And this in progressive, hustling, competitive America in the twentieth century! Can you beat it? A valuable food lying about awaiting development? Acres upon acres of idle lands waiting to be planted and highly civilized people raking leaves instead of rich food from their lawns every fall!

Note:—Above is an editorial from the American Nut Journal, Rochester, N. Y., Sept., 1919.

Great Neck, N. Y., Apr. 1st, 1919

Mr. J. F. Jones, Lancaster, Pa.

Dear Sir—The nut trees arrived yesterday and are heeled in for planting to-day. From trees received a few days ago from . . . . . I was very anxious about the trees coming from you, as they were the poorest trees I ever put my eyes on! After seeing your trees I can see why I have had such poor luck planting nut trees and I will know where to get them in the future.

PAUL BRORSTROM.

New York, Feb. 18th, 1919

Mr. J. F. Jones, Lancaster, Pa.

Dear Sir—Near my home at Northport, a friend has a fine English walnut tree that bears well every year, of good sized, soft-shelled nuts. It passed through the severe winter of last year (1917-18) when the mercury went down to 18 below zero, apparently uninjured and bore last fall.

VICTOR F. LeCOY.

Colemans Falls, Va., Dec. 2d, 1919

Mr. J. F. Jones, Lancaster, Pa.

Dear Sir—The trees arrived and were promptly planted. They are fine. I have never believed in saving a few cents by buying cheap trees. The difference amounts to nothing in the end. Give me the best and let me feel that I can absolutely depend upon you, and then charge a fair price is what I ask.

S. von AMMON.

Moore, Pa., May 14th, 1919

Mr. J. F. Jones, Lancaster, Pa.

Dear Sir—The trees you sent the 5th arrived here safely the 9th. I am a native of Belgium and English walnut trees are very plentiful there, and I know how very delicious the fresh walnuts are. I am sure more people would grow them if they only knew.

MRS. J. A. WILSON.



